

Notice of Allowability

Application No.

10/525,927

Examiner

Charles R. Kasenge

Applicant(s)

MORFINO, GIUSEPPE

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed 12/22/06.
2. ☒ The allowed claim(s) is/are 1-3, 6-21, 23 and 25-47.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20070221.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Farah on 2/21/07.

2. The application has been amended as follows:

- a. Original Claim 1: Line 8

- i. In line 8, Delete "and"

- b. Original Claim 8: Lines 1, 2, 9 and 10

- ii. In line 1, Replace "The process" with --A process--
 - iii. In line 2, Replace "a system according to Claim 1" with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them

from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said sensors about a distance that separates said sensors from said ball, to detect the XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks--

iv. In line 9, Delete "according to Claim 1"

v. In line 10, Delete "according to Claim 1"

c. Original Claim 20: Line 1, 2 and 7

vi. In line 1, Replace "The process" with --A process--

vii. In line 2, Replace "a system according to Claim 1" with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said

Art Unit: 2125

sensors about a distance that separates said sensors from said ball, to detect the XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks--

viii. In line 7, Delete "according to Claim 1"

d. Original Claim 21: Line 1 and 2

ix. In line 1, Replace "The process" with --A process--

x. In line 2, Replace "a system according to Claim 1" with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said sensors about a distance that separates said sensors from said ball, to detect the XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors

that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks--

e. Original Claim 23: Line 1

xi. In line 1, Replace “a system according to Claim 1” with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said sensors about a distance that separates said sensors from said ball, to detect the XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks,--

f. Original Claim 25: Line 1

xii. In line 1, Replace “a system according to Claim 1” with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said sensors about a distance that separates said sensors from said ball, to detect the XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks,--

g. Original Claim 32: Line 1, 2, 9 and 10

xiii. In line 1, Replace “The process” with --A process--

xiv. In line 2, Replace “a system according to Claim 26” with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage

tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein said support base is connected to bearing means adapted to allow a rotation of said support base up to 90° with respect to its own axis, in order to reach a plurality of operating positions between two mutually perpendicular extreme axes, said bearing means being further adapted to simultaneously allow a rotation of said support base, once having reached the extreme axis position, around the axis perpendicular thereto--

xv. In line 9, Delete "according to Claim 26"

xvi. In line 10, Replace "the system according to Claim 1" with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said sensors about a distance that separates said sensors from said ball, to detect the

XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks,--

h. Original Claim 44: Line 1, 2, 6 and 7

xvii. In line 1, Replace "The process" with --A process--

xviii. In line 2, Replace "a system according to Claim 26" with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein said support base is connected to bearing means adapted to allow a rotation of said support base up to 90° with respect to its own axis, in order to reach a plurality of operating positions between two mutually perpendicular extreme axes, said bearing means being further adapted to simultaneously allow a rotation of said support base, once having reached the extreme axis position, around the axis perpendicular thereto--

xix. In lines 6 and 7, Replace “the system according to Claim 1” with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said sensors about a distance that separates said sensors from said ball, to detect the XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks—

i. Original Claim 45: Lines 1 and 2

xx. In line 1, Replace “The process” with --A process--

xxi. In line 2, Replace “a system according to Claim 26” with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage

tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein said support base is connected to bearing means adapted to allow a rotation of said support base up to 90° with respect to its own axis, in order to reach a plurality of operating positions between two mutually perpendicular extreme axes, said bearing means being further adapted to simultaneously allow a rotation of said support base, once having reached the extreme axis position, around the axis perpendicular thereto—

j. Original Claim 46: Line 1

xxii. In line 1, Replace “a system according to Claim 1” with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said

sensors about a distance that separates said sensors from said ball, to detect the XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks,--

k. Original Claim 47: Line 1

xxiii. In line 1, Replace “a system according to Claim 1” with --a system for measuring, compensating and testing numerically controlled machine tool heads and/or tables, characterized in that it comprises: at least one support base equipped with a plurality of distance sensors; and at least one device of the gage tool type composed of an elongated cylinder, said cylinder being equipped at one of its ends with connection means for said heads and being equipped at another opposite end with a ball, said ball being placed next to said sensors so that they are able, always and in any position, to measure a distance that separates them from said ball; wherein the system is operatively coupled with processing means, said processing means being adapted through a single measure obtained by said sensors about a distance that separates said sensors from said ball, to detect the XYZ coordinates of a center of a tool in a position of interest; and wherein said processing means comprise means for performing measure processes for errors that can be modeled, means for performing measure processes for errors that cannot be modeled and means for performing dynamic checks,--

Allowable Subject Matter

3. Claims 1-3, 6-21, 23 and 25-47 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles R. Kasenge whose telephone number is 571 272-3743.

The examiner can normally be reached on Monday through Friday, 8:30 - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



CK
February 21, 2007

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100